

Application No. 10/070,492
Amendment Dated November 8, 2004
Reply to Office Action of September 9, 2004

REMARKS/ARGUMENTS

Prior to this Amendment, claims 28-41, 44-47, and 49-51 were pending in the present application. By this Amendment, claim 28 is amended. Subsequent to the present Amendment, claims 28-41, 44-47 and 49-51 remain pending.

No new matter has been added by the present Amendment. Reconsideration and allowance of the application, as amended, are respectfully requested.

ALLOWED CLAIMS:

Applicants note with appreciation that the Examiner has allowed claims 35-41, 44-47 and 49-51.

REJECTION UNDER 35 U.S.C. § 103:

The Examiner rejected claims 28, 29, 33 and 34 under 35 U.S.C. § 103(a) as being unpatentable for obviousness over GB 960,488 in view of U.S. Patent No. 5,192,390 (Perkins) and at least one of U.S. Patent No. 1,938,787 (Abbott, Jr.) and U.S. Patent No. 4,824,515 (Still et al.).

The Examiner rejected claim 30 under 35 U.S.C. 103(a) as being unpatentable for obviousness over GB 960,488 in view of U.S. Patent No. 5,192,390 (Perkins) and at least one of U.S. Patent No. 1,938,787 (Abbott, Jr.) and U.S. Patent No. 4,824,515 (Still et al.), and further in view of U.S. Patent No. 1,337,690 (Converse et al.).

The Examiner rejected claims 31 and 32 under 35 U.S.C. § 103(a) as being unpatentable over GB 960,488 in view of U.S. Patent No. 5,192,390 (Perkins) and at least one of U.S. Patent No.

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1,938,787 (Abbott, Jr.) and U.S. Patent No. 4,824,515 (Still et al.), and further in view of U.S. Patent No. 4,126,720 (Edwards) and U.S. Patent No. 1,422,451 (Krusemark).

Applicant respectfully traverses the rejections for the following reasons.

A novel feature of the present invention is the forming of a single ply for a tire from a cord and rubber, and transporting the ply to a tire building drum, one by one. Accordingly, the present invention provides for the elimination of a space for installing a body ply material producing device and a space for storing intermediates of a body ply material.

GB 960,488 discloses a method and an apparatus for producing rubberized tire fabric. The method includes the steps of manufacturing a ribbon 1 in the form of a cord 2 having a rubber covering 3 applied thereto, spirally winding the ribbon on a drum 19 to manufacture a wrapper, and cutting the wrapper along the longitudinal direction of the drum 19. GB '488 discloses, if desired, the method will form a single ply for a tire. However, GB '488 does not disclose and or suggest receiving a single cut ply, directly transporting the ply to the tire building drum and making a ply band, one by one. Therefore, GB '488 does not disclose and teach the claimed feature.

U.S. Patent No. 5,192,390 (Perkins) discloses mandrel means for forming tubular articles by helical winding of strip material or tape 25 around the mandrel means. The mandrel 29 comprises an endless belt 37 and two support drums 36. The tape 25 is wound around the mandrel 37. The envelope of the wound tape 25 is cut by a knife 41 to make a ply. A set of clamps 44 mounted on a carriage 43 grips the edge of the ply and pulls the ply off the mandrel as the carriage moves outwards. Perkins discloses producing a reinforced ply of a wide range of sizes, gripping a cut ply

on the mandrel and pulling the ply off the mandrel. In addition, Perkins discloses that the cutter cut a plurality of ply pieces and that a ply removal carriage moves into position under the mandrel. However, Perkins does not disclose forming and transporting a single ply, one by one. Gripping a cut ply edge and pulling the ply off the mandrel make ply cords disarrange, which are placed side-by-side. Accordingly, Perkins fails to disclose and teach the claimed feature.

U.S. Patent No. 1,938,787 (Abbott et al.) discloses that the work is secured upon the surface of the measuring drum by means of suction applied to the surface thereof. However, Abbott et al. fail to disclose and teach the claimed feature.

U.S. Patent No. 4,824,515 (Still et al.) discloses that a source of vacuum or a source of purge air is used to provide a means for causing the ply material to be gripped by the table. However, Still et al. fail to disclose and teach the claimed feature.

U.S. Patent No. 1,337,690 (Converse et al.) discloses a method of making adhesive cord strips and a winding mechanism therefor. A cord is sometimes passed through a tube machine for applying a plastic rubber coating to the cord. The cord is wound around a drum 20 and then is cut along a helical groove 37 on the drum 20. Converse et al. disclose only winding the rubberized cord on a cylindrical drum and cutting the cord-cylinder along a helical groove on the drum. Converse et al. do not disclose forming a single ply for the tire form a cord and rubber, and transporting the ply to the tire building drum, one by one. Therefore, Converse et al. do not disclose and teach the claimed feature.

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U.S. Patent No. 4,126,720 (Edwards) discloses a method of forming a body ply for a radial tire. A ribbon 10, embedded in elastomeric material, is helically wound on a drum 22. The wound ribbon is removed from the drum, flattened to form a sheet of material of the length of the wound cylinder, formed into a further cylinder, and the two ends of the sheet are joined to form the body ply of the radial tire. Edwards does not disclose the claimed feature.

U.S. Patent No. 1,422,451 (Krusemark) discloses a method of making rubberized tire fabric. A cord is wound on a mandrel consisting of a pair of bars 7. After the cords are wound, the mandrel is collapsed to shift the cords to an oblique position. Then, a piece of rubberized open-weave fabric 13 is wrapped around the coil of cords. The fabric is adhered to the cord-coil. However, Krusemark fails to disclose and teach the claimed feature.

Accordingly, the claimed invention is patentable over the cited references. It is therefore respectfully requested that the Examiner withdraw the rejection of claims 28-34 under 35 U.S.C. § 103 and pass these claims to allowance and issuance.

For at least the reasons set forth above, it is respectfully submitted that the rejections under 35 U.S.C. § 103(a) above should be withdrawn and that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

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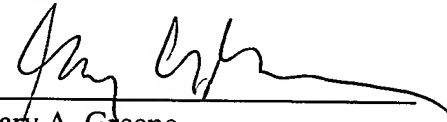
Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,

CAESAR, RIVISE, BERNSTEIN,
COHEN & POKOTILOW, LTD.

November 8, 2004

Please charge or credit our Account
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entry and/or ensure consideration of
this submission.

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